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ABSTRACT

Statistics show that the improvement in the U.S. infant mortality rate began slowing down in 1981 and completely ended in 1985; this has been reflected in a significant increase in the percentage of infants born prematurely and with low birth weight. Increased attention is being given to the effects of maternal behavior during pregnancy, and inadequate prenatal care is associated with many poor birth and postnatal outcomes. The hypothesis of one longitudinal study of 100 pregnant Black and Caucasian lower- and middle-class women is that the use of prenatal health services is related to women's beliefs concerning their control over their pregnancy and birth outcomes. The model underlying this study predicts that pregnant women high in internality will use prenatal health services at an optimum level, adhere to recommended prenatal health behavior guidelines, and experience good pregnancy and birth outcomes. The study uses the Pregnancy Belief Scales, which explore pregnant women's degree of perceived control or internality about pregnancy and birth outcomes, and the extent to which pregnant women believe that chance or powerful others affect their pregnancy and birth outcomes. Early findings from the study suggest that pregnancy-related health beliefs are consistent and stable indicators of pregnancy and birth outcomes. (LB)

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"Maternal Beliefs, Health Services Utilization and
Child Outcomes: Developmental Analyses"¹

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According to available statistics, the improvement in the U.S. infant mortality rate began slowing down in 1981, and completely ended in 1985. This has been reflected in a significant increase in the percentage of infants born at low birthweight and a contemporaneous increase in the prematurity rate. In response to these trends, substantial efforts are being made to find more effective ways to identify women at risk of bearing low birthweight and premature infants, thereby preventing the subsequent effects of these events on the perinatal and postnatal status of infants.

In light of the renewed emphasis on these problems, increased attention is currently being given to the effects of maternal behavior during pregnancy on both the course and outcome of pregnancy as well as the postnatal status of the infant. Inadequate prenatal care has been associated with a multitude of poor birth and postnatal outcomes. The impact of prenatal care on infant and child outcomes has also received considerable attention, in part, because among the major prenatal and perinatal risk factors, prenatal care is usually conceptualized as the most amenable to change.

¹Paper presented at the annual meeting of the American Psychological Association, New Orleans, August, 1989.

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However, during the last few years, the percentage of babies born to mothers who received late or no prenatal care has increased. Moreover, despite the fact that it is known that early prenatal care is critical to infant health and well-being, almost one-quarter of all infants are born to mothers who do not receive prenatal care during the first trimester of pregnancy. Of the mothers who do receive early prenatal care, approximately one-third do not receive prenatal care which can be classified as adequate in terms of timing and number of visits. The U.S. Department of Health and Human Services now projects that its own goal of achieving substantially improved outcomes for U.S. pregnant women and their babies by 1990 will not be met.

Despite a substantial body of research focused on the associations among demographic factors and prenatal care, these relationships remain unclear. Moreover, there is evidence that not all the shortcomings in prenatal care are attributable to poverty-related service delivery problems. More recently, research interest has focused on a variety of psychosocial factors which may be influences on pregnancy risk. The substantiation of these behavioral risks for inadequate prenatal care and low birthweight suggest that interventions designed to reduce the levels of these risk factors must address issues beyond those of medical care. Behavioral initiatives are necessary to identify these psychosocial risk factors, which will permit the development of cost effective perinatal prevention efforts designed to minimize the rates of inadequate prenatal care and low birthweight infants.

Although the reasons for pregnant women's underutilization of prenatal health services are complex, the hypothesis underlying this longitudinal project is that utilization of prenatal health services is

related to a set of specific psychosocial factors, namely, women's beliefs concerning the control they perceive over their pregnancy and birth outcomes, which in turn affects these pregnancy and birth outcomes.

The principle measure in this study was an assessment of pregnant women's beliefs which was specifically aimed at the evaluation of women's beliefs concerning their control of their pregnancy and birth outcomes. The Pregnancy Belief Scales, explore three factors: (1) pregnant women's degree of perceived control or internality with respect to their pregnancy and birth outcomes, (2) the extent to which pregnant women believe that "chance" or (3) "powerful others" affects their pregnancy and birth outcomes.

An additional focus of this study was to determine the longitudinal relationships among pregnancy-related health beliefs, utilization of prenatal health services, and pregnancy and birth outcomes, in order to determine the usefulness of pregnancy-related health beliefs as stable and consistent predictors of mothers pregnancy-related behaviors and pregnancy and birth outcomes.

The model underlying this study predicts that pregnant women who are high in internality with respect to the control they perceive concerning their pregnancy and birth outcomes will utilize prenatal health services at an optimum level, adhere to recommended prenatal health behavior guidelines, and experience good pregnancy and birth outcomes.

A total of one hundred (100) pregnant black and Caucasian lower- and middle-class women, have participated in this longitudinal study. Recruitment takes place during the first trimester of pregnancy and continues during the third trimester, one-week following birth, and when the infant is 1-, 3-, 6-, 9-, 12-, 15-, 18-, 21-, and 24-months of age.

Pregnancy-related and maternal health beliefs are measured according to the three dimensions stated above: "internality", "chance", and "powerful others." Utilization of prenatal and pediatric health services, adherence to recommended prenatal health guidelines, birth outcomes, and infant health and developmental status are related to these pregnancy-related and maternal health beliefs.

Results from analyses of data from sixty-two (62) mothers from early prenatal and postnatal timepoints reveal several patterns in these data. First, it is apparent that high stability for all three dimensions of pregnancy-related health beliefs exists across the prenatal and postnatal timepoints. Second, with respect to the relationship between mothers' pregnancy-related health beliefs and compliance with prenatal health regimens, the rates of several health behaviors were significantly higher in women with higher internal beliefs concerning the control they perceived over their birth outcomes. Moreover, there were significant negative correlations between third-trimester pregnancy-related health beliefs and birth outcomes as measured by the Obstetrical Complications Scale a quantification of significant postnatal events (Littman & Parmalee, 1978), which suggests that mothers who are high in internality during pregnancy had infants with fewer postnatal complications.

The strong relationships among these dimensions over time in conjunction with these results demonstrating relationships among these beliefs, health behaviors and outcomes are encouraging, suggesting that pregnancy-related health beliefs measured in this manner are consistent and stable indicators. Second, there are clear relationships among mother's pregnancy-related-health beliefs, health behaviors during pregnancy and birth outcomes. Specifically, mothers' perceptions of

control of birth outcomes are related to both preventive health behavior during pregnancy and actual birth outcomes. Or, in other words, mothers' beliefs that they can influence their birth outcomes are related to taking better care of themselves during pregnancy, as well as to birth outcome. Similarly, mother's beliefs that "chance" or "powerful others" influence their birth outcomes are related to less preventive health behavior during pregnancy and poorer birth outcomes.

The results from this project will have both theoretical and applied implications. First, these data will provide much needed information concerning the role of pregnancy-related health beliefs in the utilization of prenatal health services and pregnancy, birth and postnatal outcomes, providing an empirical basis for a model of prenatal health services utilization. From an applied viewpoint, the study will provide systematic information concerning targeted ways in which prenatal services usage might be increased. The use of prevention techniques which are aimed at incorporating the levels of pregnancy-related internality of pregnant women might lead to increased utilization of prenatal health services and more optimal levels of adherence to prenatal health regimens, thereby having implications for prematurity and low birthweight rates.

As the families are followed through later postnatal timepoints, these data will permit the evaluation of whether the predictive value of pregnancy-related health beliefs will be equally useful for long-term as well as short-term prediction of postnatal health and developmental status over the course of the infant's first two years of life. However, the current short-term analyses are promising and suggest usefully potential relationships among pregnancy related beliefs, behaviors and outcomes.